

# United States Patent and Trademark Office



UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO	
10/666,462 09/19/2003		Brent Stone	42P16890	8351	
8791	7590 10/26/2005		EXAMINER		
	SOKOLOFF TAYLO	HYEON, HAE M			
SEVENTH I		ART UNIT	PAPER NUMBER		
LOS ANGE	LES, CA 90025-1030	2839			
			DATE MAILED: 10/26/200	DATE MAILED: 10/26/2005	

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary		Арі	olication No.	Applicant(s)				
		10/	666,462	STONE ET AL.	STONE ET AL.			
		Exa	miner	Art Unit				
		Hae	e M. Hyeon	2839				
Period fo	The MAILING DATE of this commun r Reply	nication appears	on the cover sheet with the	correspondence ad	ddress			
WHIC - Exter after - If NO - Failu Any r	ORTENED STATUTORY PERIOD FOR CHEVER IS LONGER, FROM THE MISSIONS of time may be available under the provision SIX (6) MONTHS from the mailing date of this comperiod for reply is specified above, the maximum is to to reply within the set or extended period for reply received by the Office later than three months and patent term adjustment. See 37 CFR 1.704(b).	MAILING DATE (s of 37 CFR 1.136(a). munication. tatutory period will app y will, by statute, cause	OF THIS COMMUNICATION In no event, however, may a reply be and will expire SIX (6) MONTHS from the application to become ABANDON	ON. timely filed om the mailing date of this o NED (35 U.S.C. § 133).				
Status								
1)🖂	Responsive to communication(s) fil	ed on <u>09 Septer</u>	<u>mber 2005</u> .					
2a)⊠	This action is FINAL.	2b) This action	on is non-final.					
3)	Since this application is in condition for allowance except for formal matters, prosecution as to the merits is							
	closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.							
Dispositi	on of Claims							
4)🖂	4) Claim(s) 1-16 is/are pending in the application.							
	4a) Of the above claim(s) is/are withdrawn from consideration.							
5)	Claim(s) is/are allowed.							
6)⊠	Claim(s) <u>1-16</u> is/are rejected.							
7)	Claim(s) is/are objected to.							
8)[	Claim(s) are subject to restri	ction and/or ele	ction requirement.					
Applicati	on Papers			•				
9)[	The specification is objected to by the	ne Examiner.						
10)⊠ The drawing(s) filed on <u>19 September 2003</u> is/are: a)⊠ accepted or b)⊡ objected to by the Examiner.								
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).								
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).								
11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.								
Priority ι	ınder 35 U.S.C. § 119	·						
12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of:								
	1. Certified copies of the priority documents have been received.							
	2. Certified copies of the priority							
	3. Copies of the certified copies			ived in this Nationa	i Stage			
* 6	application from the Internati See the attached detailed Office acti	· ·		ved				
,	see the attached detailed Office acti	on for a list of th	e certified copies flot recei	veu.				
Attachmen	t(s)							
1) Notice of References Cited (PTO-892)  4) Interview Summary (PTO-413)								
2) Notice	e of Draftsperson's Patent Drawing Review (		Paper No(s)/Mail 5) Notice of Informa		· · ()-152)			
. —	mation Disclosure Statement(s) (PTO-1449 or Pr No(s)/Mail Date	or PTO/SB/08)	6) Other:		<u> </u>			

Application/Control Number: 10/666,462

Art Unit: 2839

#### **DETAILED ACTION**

## Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

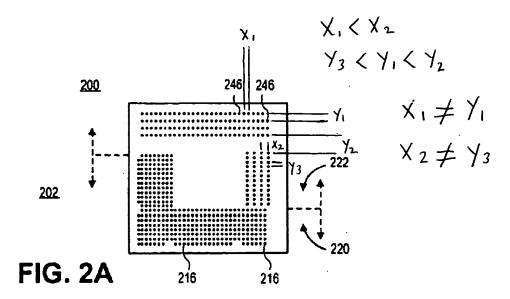
A person shall be entitled to a patent unless -

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- 2. Claims 1-16 rejected under 35 U.S.C. 102(b) as being anticipated by Searls (US 6,752,635 B1).

Searls discloses an apparatus comprising a printed circuit board (PCB) 202, a connector 204, and a land grid array (LGA) integrated circuit (IC) package 208. Searls teaches that the connector 204 includes two different contacts pins 118 and 240, wherein the pitch of the contact pins 240 is smaller than the pitch of the contact pins 118 (see column 3, lines 63-67). Figures 2A-2E show the PCB 202, the IC package 208 and the connector 204 having a plurality of contacts corresponding to each other such that the PCB 202, the IC package 208 and the connector 204 can be electrically connected to each other. Also, Figure 2A clearly show the plurality of lands including a vertical pitch having a first distance and a horizontal pitch having a second distance. Although Searls does not state that the PCB 202 to be a motherboard and the connector 204 to be a zero insertion force (ZIP) connector, the main PCB in an apparatus is usually called a motherboard and Figure 2B of Searls clearly shows that the connector 204 of Searls is ZIP connector. Column 3, lines 16-31 describes that the IC package 208 has at least one input/output connector (pin and land).

Application/Control Number: 10/666,462

Art Unit: 2839



### Response to Arguments

3. Applicant's arguments filed on September 9, 2005 have been fully considered but they are not persuasive. The applicant argues that the reference by Searls does not disclose input/output (I/O) lands having a varied pitch distance. Instead, Searls discloses that contact pins that are inserted to a power delivery area have a smaller pitch than pins inserted into a signal delivery area. Nevertheless, the pins in the signal delivery area all have the same pitch.

The examiner disagrees the applicant because Searls clearly shows in Figure 2A that the power contacts have different X and Y distances and the signal contacts have different X and Y distances of the power contacts are different from the X and Y distances of the signal contacts. The drawings of the instant invention also show only the X and Y distance of the contacts being different. However, all the contacts are uniformly arranged.

Searls clearly shows the X and Y distances being different. Therefore, Searls discloses I/O lands having a varied pitch distance. Thus, the examiner believes that the rejections applied in the previous office action are appropriate.

Application/Control Number: 10/666,462

Art Unit: 2839

#### Conclusion

4. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hae M. Hyeon whose telephone number is 571-272-2093. The examiner can normally be reached on Mon.-Fri. (8:30-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tulsidas C. Patel can be reached on (571) 272-2098. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number: 10/666,462 Page 5

Art Unit: 2839

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hae M Hyeon Primary Examiner Art Unit 2839

hmh hmh

Hae Moon Hyeon